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EXAMINER	
SHENG, TOM V	

ART UNIT	PAPER NUMBER
2673	17

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/854,316	WONG ET AL.	
	Examiner	Art Unit	
	Tom V Sheng	2673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-27,30-40,42-53 and 55-61* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *38* is/are allowed.

6)☒ Claim(s) *1,4-9,13-20,23-27,30-37,39,40,42-53 and 58-61* is/are rejected.

7)☒ Claim(s) *10-12,21,22 and 55-57* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 4-9, 13-20, 23-27, 30-37, 39-40, 42-53 and 58-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fishkin et al. (US 6,243,075 B1) in view of Yates et al. (US 6,225,976 B1).

As for claim 1, Fishkin teaches a computing device (figure 1, device 10, which can be further embodied as figures 3, 4, 5, 9 or 11) comprising:

a display that is deflectable (device 10 has a deformable surface 20 that may include a display 30; column 4, line 66 to column 5, line 10; figure 3 shows device 122 having a display to be depressible on the sides; figure 4 shows device 132 having a display to be squeezable; figure 5 show device 142 having a display to be foldable);

a memory to store a data collection, the data collection corresponding to a plurality of pages that are associated together in a sequence to form a paginated content, *wherein each page is individually presentable on the display* (inherently by teaching in figure 9 a device 180 that displays a subset of pages from a multi-page document; column 10, lines 6-16; a multi-page document is inherently associated in a sequence; i.e. page 1 follows by page 2 follows by page 3, etc);

a processor coupled to the display and the memory, the processor being configured to use data from the collection of data to present one or more pages from the plurality of pages on the display; (device 10 has a processor 24 that is coupled to display 30 and memory 26 shown in figure 1 and inherently would be used to retrieve and present data from memory; column 6, lines 43-52) and

a sensor device coupled to the processor to measure a deflection of the display, wherein the processor uses the sensor device to determine a deflection value that coincides with the measured deflection of the display (the deformable surface 20 has an underlying deformation sensor mesh 22 for detecting surface deformation and is connected to processor 24; column 4, line 66 to column 5, line 4; further, it shows that the strength of the applied force can be measured and supplied to the processor directly or indirectly; column 6, lines 17-23 and column 8, lines 17-18).

Fishkin does not teach wherein the processor is configured to use the deflection value to determine at least a rate at which *at least portions of individual pages in the plurality of pages are presented in a sequence on the display.*

Yates teaches a remote computer input peripheral (figure 1, peripheral 10) with a pan and scroll bar operation wherein the screen would pan or scroll when one of the arrows 28, 30, 32, or 34 are pressed. Further, the harder an arrow is pressed, the faster the screen pans or scrolls. See column 4, lines 34-39. One of ordinary skill in the art would realize the similarity between displaying a set of pages on device 180 and the scrolling of a plurality of pages of a document on a display/screen.

Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to combine the variable rate display feature of Yates into Fishkin's deformable display device 180 in order to be able to sequentially present multiple pages on the display in proportion with the deflection of the display, because of the benefit of sequentially viewing multiple pages of a document in natural manner without the use of any button.

As to claims 4, 8, Fishkin's sensor data in analog form reads on claimed analog value (column 6, lines 17-24). The sensor data corresponds to the strength of force applied.

As to claims 5, 6, 7, Fishkin's sensor mesh is underlying the display surface and is thus integrated with the display and overlaid by the display.

As to claims 9, the speed of the panning/scrolling operation of Yates reads on claimed frequency at which the portions of multiple pages are presented on the display.

Claim 13 is read by Fishkin's analog to digital converter (column 6, lines 23-24).

As for claim 14, Yates teaches a digitizer as well as a display.

As for claims 15-16, Fishkin as modified would have the digitizer integrated with the display. Naturally, the sensor device would be underneath the digitizer to avoid interfering with the digitizing function using a stylus or a finger.

Claims 17-20 and 23-26 are method claims corresponding to apparatus claims 1, 4-9, 13-16 and accordingly rejected. The discrete elements of display are generally known as pixels in a matrix display device such as LCD, plasma display, or electrophoretic display.

As for claims 27, 31, Fishkin teaches a method for displaying information on a computing device assembly (figure 1, device 10, which can be further embodied as figures 3, 4, 5, 9 or 11), the method comprising:

measuring a deflection of a surface (device 10 has a deformable surface 20 that may include a display 30; column 4, line 66 to column 5, line 10; figure 3 shows device 122 having a display to be depressible on the sides; figure 4 shows device 132 having a display to be squeezable; figure 5 shows a display to be foldable) of the computing device assembly (the deformable surface 20 has an underlying deformation sensor mesh 22 for detecting surface deformation and is connected to processor 24; column 4, line 66 to column 5, line 4; further, it shows that the strength of the applied force can be measured and supplied to the processor directly or indirectly; column 6, lines 17-23 and column 8, lines 17-18),

accessing a data collection, the data collection including a plurality of pages that are associated together in a sequence to form a paginated content (inherently by teaching in figure 9 a device 180 that displays a subset of pages from a multi-page document; column 10, lines 6-16; a multi-page document is inherently associated in a sequence; i.e. page 1 follows by page 2 follows by page 3, etc).

Fishkin further teaches in one embodiment (figure 3) that upon depressing a particular side of a device, the currently selected object 125 would move away from that side to a new position 126 (column 8, line 64 to column 9, line 6). Moreover, since the deformation sensor mesh 22 is located underlying the deformable surface 20, it is inherently understood that as a side is depressed, a deformation occurs with the sensor

and the (display) surface. And if the deformation were not apparent, the deformation of the display that occurs when the device is squeezed would be easily noticed (figure 4).

Fishkin does not teach that in response to measuring the deflation, selecting multiple pages from the plurality of pages using the measured deflection; then *displaying at least portions of multiple pages sequentially over an interval of time at a rate determined at least in part by the deflection*; and wherein measuring the deflection of the surface includes measuring a deflection of a display for the computing device.

Yates teaches a remote computer input peripheral (figure 1, peripheral 10) with a pan and scroll bar operation wherein the screen would pan or scroll when one of the arrows 28, 30, 32, or 34 are pressed. Further, the harder an arrow is pressed, the faster the screen pans or scrolls. See column 4, lines 34-39. Being faster or slower represents a rate that corresponds with a time interval.

Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to combine the variable rate display feature of Yates into Fishkin's deformable display device 180 in order to be able to sequentially present at least portions of the multiple pages on the display, in proportion with the deflection of the display, because of the benefit of sequentially viewing multiple pages of a document in natural manner without the use of any button.

As to claims 30 and 32, the speed of the panning/scrolling operation of Yates reads on claimed frequency at which the portions of multiple pages are presented on the display.

Claim 33 corresponds to claims 27, 30, 32 and the additional limitation *wherein displaying at least portions of the multiple pages includes displaying portions of selected pages that are separated by other pages in the predetermined order.* Analyses of rejections of claims 27, 30, and 32 apply. Further, Fishkin teaches two pages mode (figure 11, column 10, lines 33-42) of displaying in a two-page format reading on claimed *portions of selected pages.*

As for claims 34-35, sequential display is always in a predetermined order such as increasing or decreasing.

As to claims 36, Fishkin's sensor data in analog form reads on claimed analog value (column 6, lines 17-24). The sensor data corresponds to the strength of force applied.

Claim 37, 47-48 are rejected per analysis of claim 1.

Claim 39 is a method claim readable on elements of claim 27 except using a memory to identify data representing a plurality of pages. The analysis of claim 27 is applicable. Further, Fishkin teaches a memory 26 as shown in figure 1 and inherently would be used to store the plurality of pages; column 6, lines 43-52.

As for claims 40 and 42, Fishkin/Yates teaches selection of multiple pages and in a sequential (predetermined) order as analyzed in claim 27.

Claims 43-46 are rejected per analyses of claims 27, 30-32. Whether a deflection causes one page to present on the display or multiple pages is simply associated with the degree/measure of deflection. Moreover, since rate is understood as number of pages over a period of time, it is not different from frequency.

As to claims 49 and 53, Fishkin's sensor data in analog form reads on claimed analog value (column 6, lines 17-24). The sensor data corresponds to the strength of force applied.

As to claims 50, 51, 52, Fishkin's sensor mesh is underlying the display surface and is thus integrated with the display and overlaid by the display.

Claim 58 is read by Fishkin's analog to digital converter (column 6, lines 23-24).

As for claim 59, Yates teaches a digitizer as well as a display.

As for claims 60-61, Fishkin as modified would have the digitizer integrated with the display. Naturally, the sensor device would be underneath the digitizer to avoid interfering with the digitizing function using a stylus or a finger.

Allowable Subject Matter

3. Claim 38 is allowed.

4. Claims 10-12, 21-22, 55-57 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter: none of the prior arts of record teaches the limitation "displays during an/the interval at least portions of a current page and a subsequent page, the subsequent page having a proximity to the current page in a pre-determined order of the data collection, and wherein the analog value indicates the proximity of the subsequent page to the current page" of claims 10, 38 and 55, "a second area of the display includes

discrete elements that are assigned values from a current page while the discrete elements of the first area are sequentially assigned values from the select pages in the set of pages" of claim 21. Claims 11-12 are dependent on claim 10. Claim 22 is dependent on claim 21. Claims 56-57 are dependent on claim 55.

Examiner's Comments

In formulating a response/amendment to this action, applicant should also consider the following closely related reference. Allport et al. (US 6,061,050) teaches that both page turning and scrolling are both known as information sequencing (column 1, lines 31-35). Allport further teaches page turning in either one or multiple pages as determined by the position and velocity of a user's finger on a user interface for document navigation (figure 1; column 3, line 66 through column 4, line 41).

Response to Arguments

6. Applicant's arguments filed on 12/16/03 have been fully considered but they are not persuasive.

As for claim 1, applicant argues that neither Fishkin nor Yates teaches the use of paginated content. The examiner disagrees because paginated content, that is content in terms of pages and are associated together in a sequence, is inherent in electronic document as taught by either Fishkin or Yates. For example, Microsoft's Word files are in paginated form. Moreover, Allport teaches navigation of displayed information in paginated form.

Applicant argues that Fishkin does not associate portions or pages of content with the flicking activity. The examiner disagrees because claim 1 only cites "at least portions of individual pages in the plurality of pages are presented in a sequence on the display", which is read by Yates' scrolling. The examiner would like to clarify that during scrolling, part of a first page would be on the display and part of a second (following) page would also be on the display that reads on portions of individual pages presented in a sequence.

Fishkin's deflection detection combined with Yates' sensing of magnitude on scrolling speed as analyzed does read on claimed "a rate at which at least portions of individual pages ... on the display". Scrolling is different from page turning (flicking) as applicant argued, however the claim does not overcome the Yates reference.

As for claims 17, 33 and 39, applicant argues that the cited references do not teach use of a deflection value to select pages from a paginated content. The examiner disagrees as modified Fishkin teaches different scroll speeds that naturally correspond to different number of pages selected for sequential display.

As for claims 27, 33 and 47, examiner's response above applies.

As for claims 17-20 and 23-26, above response applies because only a first area is claimed.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom V Sheng whose telephone number is (703) 305-6708. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (703) 305-4938. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Sheng
August 18, 2004

KENT CHANG
PRIMARY EXAMINER